

Application Serial No.: 09/442,646
Reply to Office Action dated June 17, 2003

11/26/98

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method of determining whether a storage unit included in an ink cartridge is normal, wherein the ink cartridge is configured to be detachably attached to a printer, the method comprising the steps of:
 - (a) reading a piece of decision ink related information that has been registered in advance in a predetermined format, from the storage unit; and
 - (b) identifying whether the read-out piece of decision ink related information satisfies the predetermined format, so as to determine whether the storage unit is normal or whether the storage unit is not normal if the read-out piece of decision ink related information has been destroyed.
2. (Currently Amended) A method in accordance with claim 1, wherein the step (b) determines that the storage unit is not normal in the case where the read-out piece of decision ink related information does not satisfy the predetermined format.
3. (Previously Presented) A method in accordance with claim 2, the method further comprising the step of:
 - (c) providing a display representing that the storage unit is not normal, when the step (b) determines that the storage unit is not normal.
4. (Previously Presented) A method in accordance with claim 2, the method further comprising the step of:
 - (d) discontinuing a printing operation of the printer, when the step (b) determined that the storage unit is not normal.

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5. (Currently Amended) A method in accordance with claim 2, wherein the step (b) uses a piece of information relating to a month of manufacture of the ink cartridge as the piece of decision ink related information.

6. (Previously Presented) A method of determining whether a storage unit included in an ink cartridge is normal, wherein the ink cartridge is configured to be detachably attached to a printer, the method comprising the steps of:

(a) reading a piece of decision information that has been registered in advance in a predetermined format, from the storage unit; and

(b) identifying whether the read-out piece of decision information satisfies the predetermined format, so as to determine whether the storage unit is normal,

wherein the step (b) determines that the storage unit is not normal in the case where the read-out piece of decision information does not satisfy the predetermined format, wherein the step (b) uses a piece of information relating to a month of manufacture of the ink cartridge as the piece of decision information, wherein the piece of information relating to the month of manufacture of the ink cartridge is expressed by a data length of four bits, and the step (b) determines that the storage unit is not normal in the case where all the four bits have an identical digit, that is, either one of '0' and '1'.

7. (Previously Presented) A method in accordance with claim 6, the method further comprising the step of:

(c) providing a display representing that the storage unit is not normal, when the step (b) determines that the storage unit is not normal.

8. (Previously Presented) A method in accordance with claim 6, the method further comprising the step of:

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(d) discontinuing a printing operation of the printer, when the step (b) determines that the storage unit is not normal.

9. (Currently Amended) A method in accordance with any one of claim 3, 4, 7 and 8, the method further comprising the step of:

(e) causing the printer to perform a printing operation, when the step (b) determines that the storage unit is normal since the read-out piece of ~~decision ink related~~ information satisfies the predetermined format.

10. (Currently Amended) A printer, to which an ink cartridge having a storage unit is detachably attached, the printer comprising:

a reading unit reading a piece of ~~decision ink related~~ information, wherein the piece of information has been registered in advance in a predetermined format, from the storage unit; and

a decision unit identifying whether the read-out piece of ~~decision ink related~~ information satisfies the predetermined format, so as to determine whether the storage unit is normal or whether the storage unit is not normal if the read-out piece of ~~decision ink related~~ information has been destroyed.

11. (Currently Amended) A printer in accordance with claim 10, wherein the decision unit determines that the storage unit is not normal in the case where the read-out piece of ~~decision ink related~~ information does not satisfy the predetermined format.

12. (Original) A printer in accordance with claim 11, the printer further comprising:
a display unit that provides a display representing that the storage unit is not normal, when the decision unit determines that the storage unit is not normal.

13. (Original) A printer in accordance with claim 11, the printer further comprising:

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a printing operation stop unit that discontinues a printing operation of the printer, when the decision unit determines that the storage unit is not normal.

14. (Currently Amended) A printer in accordance with claim 10, wherein the decision unit determines that the store unit is normal in the case where the read-out piece of decision ink related information satisfies the predetermined format.

15. (Currently Amended) A printer in accordance with either one of claims 11 and 14, wherein the piece of decision ink related information is a piece of information relating to a month of manufacture of the ink cartridge.

16. (Previously Presented) A printer, to which an ink cartridge having a storage unit is detachably attached, the printer comprising:

a reading unit reading a piece of decision information, wherein the piece of information has been registered in advance in a predetermined format, from the storage unit; and

a decision unit identifying whether the read-out piece of decision information satisfies the predetermined format, so as to determine whether or not the storage unit is normal,

wherein the decision unit determines that the storage unit is not normal in the case where the read-out piece of decision information does not satisfy the predetermined format, wherein the piece of decision information is a piece of information relating to a month of manufacture of the ink cartridge, wherein the piece of information relating to the month of manufacture of the ink cartridge is expressed by a data length of four bits, and the decision unit determines that the storage unit is not normal in the case where all the four bits have an identical digit, that is, either one of '0' and '1'.

17. (Original) A printer in accordance with claim 16, the printer further comprising:

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a display unit that provides a display representing that the storage unit is not normal, when the decision unit determines that the storage unit is not normal.

18. (Original) A printer in accordance with claim 16, the printer further comprising: a printing operation stop unit that discontinues a printing operation of the printer, when the decision unit determines that the storage unit is not normal.

19. (Currently Amended) A storage unit included in an ink cartridge, wherein the ink cartridge is detachably attached to a printer, the storage unit comprising:

an address counter that outputs a count in response to a clock signal output from the printer; and

a storage element that stores plural pieces of specific information including a piece of decision ink related information registered in a predetermined format and that is sequentially accessed based on the count output from the address counter.

20. (Original) An ink cartridge comprising a storage unit in accordance with claim 19.

21. (Currently Amended) A computer readable recording medium, on which a specific computer program is recorded, the specific computer program being used to determine whether a storage unit is normal, wherein the storage unit is included in an ink cartridge that is detachably attached to a printer, the specific computer program comprising:

a program code that causes a computer to read a piece of decision ink related information, wherein the piece of decision information has been registered in advance in a predetermined format, from the storage unit;

a program code that causes the computer to identify whether the read-out piece of decision ink related information satisfies the predetermined format; and

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a program code that causes the computer to determine that the storage unit is not normal in the case where the read-out piece of ~~decision ink related~~ information does not satisfy the predetermined format if the read-out piece of ~~decision ink related~~ information has been destroyed.

22. (Currently Amended) A method of determining whether a readable and writable storage unit is normal, wherein the readable and writable storage unit is included in an ink cartridge that is detachably attached to a printer, the method comprising the steps of:
reading a piece of ~~decision ink related~~ information from the storage unit; and
determining whether the storage unit is normal, based on the read-out piece of ~~decision ink related~~ information, or whether the storage unit is not normal if the read-out piece of ~~decision ink related~~ information has been destroyed.

23. (Previously Presented) A printer, to which an ink cartridge having a storage unit is detachably attached, the printer comprising:

a reading unit reading a piece of decision information, wherein the piece of information has been registered in advance in a predetermined format, from the storage unit; and

a decision unit identifying whether the read-out piece of decision information satisfies the predetermined format, so as to determine whether or not the storage unit is normal, wherein the decision unit determines that the storage unit is normal in the case where the read-out piece of decision information satisfies the predetermined format, wherein the piece of decision information is a piece of information relating to a month of manufacture of the ink cartridge, wherein the piece of information relating to the month of manufacture of the ink cartridge is expressed by a data length of four bits, and the decision unit determines

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that the storage unit is not normal in the case where all the four bits have an identical digit, that is, either one of '0' and '1'.

24. (New) An ink cartridge in accordance with claim 20, wherein the piece of ink related information is a piece of information relating to a month of manufacture of the ink cartridge.

25. (New) An ink cartridge in accordance with claim 24, wherein the piece of information relating to month of manufacture of the ink cartridge is expressed by a data length of four bits, and wherein the storage unit is determined not normal in the case where all the four bits have an identical digit, that is, either one of '0' and '1'.
